CLAIMS:

1. A drive circuit for operating a resonant motor having associated motor circuitry, including a first winding and a second winding, the drive circuit comprising:

a coil drive circuit configured to operatively couple to the first winding of the motor circuitry for supplying a drive signal thereto;

a feedback circuit including at least a switch operable in a first and a second state and configured to operatively couple to the second winding; and

a control circuit operatively coupled to the switch and the coil drive circuit for providing a switching signal to said switch for switching between said first and second states, said control circuit providing a control signal to said coil drive circuit in response to a feedback signal received from said resonant motor.

2. The drive circuit of claim 1, wherein said first winding is a drive winding, said second winding is a pick-up winding, and said switch is a transistor.

3. The drive circuit of claim 1, wherein a voltage value of said feedback signal, generated by the feedback circuit, varies when said switch is in the first state, and said voltage value of said feedback signal is held substantially constant when said switch is in the second state.

4. The drive circuit of claim 1, wherein said control circuit includes a comparator for comparing a voltage value of said control circuit to a reference voltage value and for generating said switching signal according to the comparison.

5. The drive circuit of claim 4, wherein said reference voltage value is stored in a data storage device of a processor operatively coupled to said control circuit.

6. The drive circuit of claim 3, wherein said switch is a transistor and said voltage value is indicative of the voltage across a capacitor in the feedback circuit.

7. The drive circuit of claim 1, wherein said feedback circuit further includes an amplifier having at least one input, a resistor coupled in series to said amplifier, and a capacitor coupled in parallel to said amplifier, the amplifier providing said feedback signal to said control circuit.

8. An improved optical code reader of the type having a laser light source for generating a laser output beam for scanning an optical code located in one of a plurality of focal planes of said optical code reader; an oscillating mirror for reflecting and directing the laser output beam in a direction suitable for reading said optical code; a resonant motor having associated circuitry, including a first winding and a second winding, for controlling the oscillation of said oscillating mirror; and a photo detector for detecting a reflection beam corresponding to the laser output beam reflected by said optical code, said photo detector having associated circuitry for generating a data signal corresponding to data components of said reflection beam, said improved optical code reader comprising:

a drive circuit for driving said resonant motor, said drive circuit comprising:

a coil drive circuit operatively coupled to the first winding for supplying a drive signal thereto;

a feedback circuit including at a least a switch operable in a first and a second state and operatively coupled to the second winding; and

a control circuit operatively coupled to the switch and the coil drive circuit for providing a switching signal to said switch for switching between said first and second states, said control circuit providing a control signal to said coil drive circuit in response to a feedback signal received from said resonant motor.

9. The optical code reader of claim 8, wherein said first winding is a drive winding, said second winding is a pick-up winding, and said switch is a transistor.

10. The optical code reader of claim 8, wherein a voltage value of said feedback signal, generated by the feedback circuit, varies when said switch is in the first state, and said voltage value of said feedback signal is held substantially constant when said switch is in the second state.

11. The optical code reader of claim 8, wherein said control circuit includes a comparator for comparing a voltage value of said control circuit to a reference voltage value and for generating said switching signal according to the comparison.

12. The optical code reader of claim 11, wherein said reference voltage value is stored in a data storage device of a processor operatively coupled to said control circuit.

13. The optical code reader of claim 10, wherein said switch is a transistor and said voltage value is indicative of the voltage across a capacitor in the feedback circuit.

14. The optical code reader of claim 8, wherein said feedback circuit includes an amplifier having at least one input, a resistor coupled in series to said amplifier, and a capacitor coupled in parallel to said amplifier, the amplifier providing said feedback signal to said control circuit.

15. A method for operating a resonant motor having associated motor circuitry, including a first winding and a second winding, the method comprising the steps of:

applying a drive signal to said first winding of said resonant motor;

determining a voltage value of a feedback signal generated by said associated circuitry coupled to said second winding of said resonant motor;

processing the voltage value ; and

varying current supplied to said resonant motor in accordance with said processing.

16. The method of claim 15, wherein said first winding is a drive winding and said second winding is a pick-up winding, and wherein said step of supplying current to said resonant motor comprises the step of switching a switch operatively coupled to said second winding of said resonant motor.

17. The method of claim 16, wherein a voltage value of said feedback signal varies when said switch is in the first state, and said voltage value of said feedback signal is held substantially constant when said switch is in the second state.

18. The method of claim 17, wherein said switch is controlled by using a comparator for comparing said drive signal, or a processed version, with a reference voltage value.

19. The method of claim 18, wherein a step of turning off current to said resonant motor coincides with the closing of a transistor operatively coupled to said second winding of said resonant motor.

20. A resonant motor comprising:

circuitry including a first and a second winding, said first winding having a terminal for connecting to a coil drive circuit for receiving a drive signal; and

a switch having a first terminal connecting said switch in series to said second winding, and a second terminal for connecting said switch to a control circuit for receiving a switching signal therefrom, said switching signal determining an operating state of said switch.

21. The resonant motor of claim 20, wherein said control circuit provides a control signal to said coil drive circuit in response to a feedback signal received from said circuitry of said resonant motor.

22. The resonant motor of claim 21, wherein said circuitry further includes an amplifier having at least one input, a resistor coupled in series to said amplifier, and a capacitor coupled in parallel to said amplifier, the amplifier providing said feedback signal to said control circuit.